



**BP OIL**

*Benzene @ 54-300 ppb  
MTBE @ 4000 ppb*

*When can we close Benzene  
closure w/ MTBE*

BP Oil Company  
Environmental Resources Management  
Building 13, Suite N  
295 SW 41st Street  
Renton, Washington 98055-4931  
(206) 251-0667  
Fax No: (206) 251-0736

December 16, 1996

Alameda County Health Care Services Agency  
Attention Ms. Eva Chu  
1131 Harbor Bay Parkway, Room 250  
Alameda, CA 94502-6577

RE: BP Oil Site No. 11116  
Village Parkway (at 7197) and Amador Valley  
Dublin, CA

Dear Ms. Chu:

Enclosed please find a report titled Groundwater Monitoring and Sampling Report, dated October 23, 1996. The report summarizes chemical data for samples obtained from the monitoring wells at the BP site since 1990. The report also contains groundwater elevation and chemical data for the ARCO, Shell, and Unocal facilities located near the intersection of Village Parkway and Amador Valley in Dublin. I understand that this information fulfills the requirements for a site assessment for the BP site.

The report shows that aromatic petroleum hydrocarbons were detected in one of the six onsite monitoring wells sampled this quarter (AW-6) where a benzene concentration of 54 ug/l was reported. Aromatic petroleum hydrocarbons were not detected in any of the remaining wells and liquid petroleum hydrocarbon has not been documented at the site.

I understand that current Regional Water Quality Control Board guidance<sup>1</sup> allows for the closure of sites, based upon the following criteria:

- the leak has been stopped and ongoing sources, including free product, have been removed or remediated;
- the site has been adequately characterized;
- the dissolved hydrocarbon plume is not migrating;
- no water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.
- the site presents no significant threat to human health, and, the site presents no significant risk to the environment

<sup>1</sup> January 12 1996 letter to San Francisco Bay Area Responsible Parties with Leaking Underground Fuel Tank Cleanups Regulated by the San Francisco Bay Regional Water Quality Control Board Subject Supplemental Instructions to State Water Board December 8, 1995. Interim Guidance at Low Risk Fuel Leak Sites

96 DEC 27 PM 3:00  
ENVIRONMENTAL PROTECTION

Ms. E. Chu  
December 16, 1996  
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I believe that you can agree that the site satisfies the above criteria. This letter serves as a request for a finding for "no further action" and a letter of "case closure". I would like to suspend further sampling activities at this time and to remove the groundwater monitoring wells in the near future. I will assume that this is acceptable unless you indicate otherwise.

Please give me a call if you have any questions, comments or concerns regarding this request. I can be reached at (206) 251-0689.

Sincerely,



Scott Hooton  
Environmental Remediation Management

attachment

cc: Brady Nagle - Alisto  
CRWQCB, Attention Mr. K. Graves, 2101 Webster Street, Ste. 500, Oakland,  
CA 94612  
ARCO Products Company, Attention Mr. Paul Supple, 2155 South Bascom  
Avenue, Suite 202, Cambell, CA 95008

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11116  
7197 Village Parkway  
Dublin, California

Project No. 10-017-06-001

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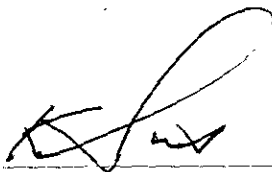
Prepared for:

BP Oil Company  
Environmental Resources Management  
295 S.W. 41st Street  
Building 13, Suite N  
Renton, Washington

Prepared by:

Alisto Engineering Group  
1575 Treat Boulevard, Suite 201  
Walnut Creek, California

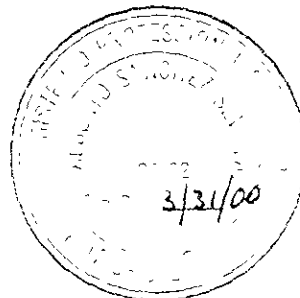
October 23, 1996



Ken Simas  
Project Manager



Al Sevilla, P.E.  
Principal



# GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11116  
7197 Village Parkway  
Dublin, California

Project No. 10-017-06-001

October 23, 1996

## INTRODUCTION

This report presents the results and findings of the August 23, 1996 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11116, 7197 Village Parkway, Dublin, California. A site vicinity map is shown on Figure 1.

## FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Groundwater monitoring was performed concurrently at the neighboring Unocal Corporation service station, 7375 Amador Valley Boulevard; the ARCO Products Company service station, 7249 Village Parkway; and the Shell Oil Company service station, 7194 Amador Valley Boulevard. The results and historical data are presented in Tables 2, 3, and 4.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Before sample collection, each well was purged of 3 casing volumes, while recording field readings of pH, temperature, electrical conductivity, and dissolved oxygen. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

## SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples collected during this and previous events are summarized in Table 1. The potentiometric groundwater elevation contour map is shown on Figure 2. The results of groundwater analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11116  
 7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-1	10/12/90	335 17	9.92	325.25	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-1	11/15/90	335 17	10.16	325.01	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-1	12/11/90	335 17	9.97	325.20	---	---	---	---	---	---	---	---	---	---	---
MW-1	02/15/91	335 17	9.89	325.28	ND<50	50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	41	(c)	SUP
MW-1	05/14/91	335 17	8.43	326.74	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	7500	ND	---	SUP
MW-1	08/23/91	335 17	9.98	325.19	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	ANA
MW-1	11/13/91	335 17	10.09	325.08	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SEQ
MW-1	02/25/92	335 17	8.28	326.89	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SEQ
MW-1	04/15/92	335 17	8.50	326.67	---	---	---	---	---	---	---	---	---	---	---
MW-1	06/03/92	335 17	9.06	326.11	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-1	08/12/92	335 17	10.01	325.16	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-1	11/10/92	335 17	10.67	324.50	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-1	02/10/93	335 17	5.25	329.92	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	PACE
MW-1	05/21/93	335 17	5.73	329.44	---	---	---	---	---	---	---	---	---	---	---
MW-1	08/12/93	335 17	8.99	326.18	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-1	11/11/93	335 17	9.65	325.52	---	---	---	---	---	---	---	---	---	---	---
MW-1	02/11/94	335 17	8.72	326.45	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	PACE
MW-1	05/17/94	335 17	8.17	327.00	---	---	---	---	---	---	---	---	---	---	---
MW-1	06/20/94	335 17	8.37	326.80	---	---	---	---	---	---	---	---	---	---	---
MW-1	10/04/94	335 17	9.66	325.51	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.5	PACE
MW-1	(d) 11/18/94	335 17	8.65	326.52	---	---	---	---	---	---	---	---	---	---	---
MW-1	02/15/95	335 17	6.56	328.61	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
MW-1	05/24/95	335 17	6.80	328.37	---	---	---	---	---	---	---	---	---	---	---
MW-1	08/29/95	335 17	8.72	326.45	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.7	ATI
MW-1	11/28/95	335 17	9.54	325.63	---	---	---	---	---	---	---	---	---	---	---
MW-1	02/26/96	335 17	5.60	329.57	---	---	---	---	---	---	---	---	---	---	---
MW-1	05/23/96	335 17	7.13	328.04	---	---	---	---	---	---	---	---	---	---	---
MW-1	08/23/96	335 17	6.71	328.46	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	5.7	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11116  
 7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-2	10/12/90	334.58	9.60	324.98	93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-2	11/15/90	334.58	9.68	324.90	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	12/11/90	334.58	9.47	325.11	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/15/91	334.58	9.28	325.30	ND<50	60	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	45	(c)	SUP
MW-2	05/14/91	334.58	7.74	326.84	130	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	6000	ND	---	SUP
MW-2	08/23/91	334.58	9.81	324.77	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	ANA
MW-2	11/13/91	334.58	9.73	324.85	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SEQ
MW-2	02/25/92	334.58	7.55	327.03	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SEQ
MW-2	04/15/92	334.58	8.00	326.58	---	---	---	---	---	---	---	---	---	---	---
MW-2	06/03/92	334.58	8.56	326.02	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-2	08/12/92	334.58	9.62	324.96	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-2	11/10/92	334.58	10.27	324.31	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-2	02/10/93	334.58	6.46	328.12	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PAGE
MW-2	05/21/93	334.58	6.96	327.62	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/12/93	334.58	8.58	326.00	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PAGE
MW-2	11/11/93	334.58	9.28	325.30	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/11/94	334.58	8.10	326.48	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PAGE
MW-2	05/17/94	334.58	7.71	326.87	---	---	---	---	---	---	---	---	---	---	---
MW-2	06/20/94	334.58	7.93	326.65	---	---	---	---	---	---	---	---	---	---	---
MW-2	10/04/94	334.58	9.27	325.31	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	5.3	PAGE
MW-2 (d)	11/18/94	334.58	8.15	326.43	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/15/95	334.58	5.97	328.61	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
MW-2	05/24/95	334.58	6.50	328.08	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/29/95	334.58	8.35	326.23	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.7	ATI
MW-2	11/28/95	334.58	9.05	325.53	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/26/96	334.58	4.49	330.09	---	---	---	---	---	---	---	---	---	---	---
MW-2	05/23/96	334.58	6.95	327.63	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/23/96	334.58	6.53	328.05	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	5.3	SPL

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 7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-3	10/12/90	335 13	10.08	325.05	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-3	11/15/90	335 13	10.12	325.01	76	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-3	12/11/90	335 13	9.92	325.21	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/15/91	335 13	9.84	325.29	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SUP
MW-3	05/14/91	335 13	8.40	326.73	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SUP
MW-3	08/23/91	335 13	10.27	324.86	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	ANA
MW-3	11/13/91	335 13	10.27	324.86	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SEQ
MW-3	02/25/92	335 13	8.15	326.98	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	SEQ
MW-3	04/15/92	335 13	8.63	326.50	---	---	---	---	---	---	---	---	---	---	---
MW-3	06/03/92	335 13	9.18	325.95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-3	08/12/92	335 13	10.18	324.95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-3	11/10/92	335 13	10.78	324.35	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-3	02/10/93	335 13	7.16	327.97	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	PACE
MW-3	05/21/93	335 13	7.69	327.44	---	---	---	---	---	---	---	---	---	---	---
MW-3	08/12/93	335 13	9.11	326.02	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-3	11/11/93	335 13	9.78	325.35	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/11/94	335 13	8.60	326.53	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-3	05/17/94	335 13	8.34	326.79	---	---	---	---	---	---	---	---	---	---	---
MW-3	06/20/94	335 13	7.45	327.68	---	---	---	---	---	---	---	---	---	---	---
MW-3	10/04/94	335 13	9.81	325.32	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	7.5	PACE
MW-3	(d) 11/18/94	335 13	8.62	326.51	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/15/95	335 13	6.61	328.52	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
MW-3	05/24/95	335 13	6.83	328.30	---	---	---	---	---	---	---	---	---	---	---
MW-3	08/29/95	335 13	8.88	326.25	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	9.1	ATI
MW-3	11/28/95	335 13	8.57	326.56	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/26/96	335 13	5.15	329.98	---	---	---	---	---	---	---	---	---	---	---
MW-3	05/23/96	335 13	7.26	327.87	---	---	---	---	---	---	---	---	---	---	---
MW-3	08/23/96	335 13	6.84	328.29	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	6.8	SPL

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 BP OIL COMPANY SERVICE STATION NO. 11116  
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ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
AW-4	11/15/90	333.41	8.51	324.90	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-4	12/11/90	333.41	9.19	324.22	---	---	---	---	---	---	---	---	---	---	---
AW-4	02/15/91	333.41	8.32	325.09	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
AW-4	05/14/91	333.41	6.97	326.44	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
AW-4	08/23/91	333.41	8.59	324.82	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	ANA
AW-4	11/13/91	333.41	8.57	324.84	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SEQ
AW-4	02/25/92	333.41	6.26	327.15	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SEQ
AW-4	04/15/92	333.41	7.05	326.36	---	---	---	---	---	---	---	---	---	---	---
AW-4	06/03/92	333.41	7.41	326.00	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-4	08/12/92	333.41	8.45	324.96	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-4	11/10/92	333.41	9.10	324.31	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-4 (e)	02/10/93	333.41	---	---	---	---	---	---	---	---	---	---	---	---	---
AW-4 (e)	05/21/93	333.41	---	---	---	---	---	---	---	---	---	---	---	---	---
AW-4 (e)	08/12/93	333.41	---	---	---	---	---	---	---	---	---	---	---	---	---
AW-4	11/11/93	333.41	8.00	325.41	---	---	---	---	---	---	---	---	---	---	---
AW-4	11/15/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
AW-4	02/11/94	333.41	6.84	326.57	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
AW-4	05/17/94	333.41	6.54	326.87	---	---	---	---	---	---	---	---	---	---	---
AW-4	06/20/94	333.41	5.70	327.71	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	2.0	PACE
AW-4	10/04/94	333.41	8.04	325.37	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.1	PACE
AW-4 (d)	11/18/94	333.41	6.80	326.61	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	2.3	PACE
AW-4	02/15/95	333.41	4.91	328.50	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
AW-4	05/24/95	333.41	5.32	328.09	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	4.9	ATI
AW-4	08/29/95	333.41	7.26	326.15	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	9.1	ATI
AW-4	11/28/95	333.41	7.81	325.60	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	5.3	ATI
AW-4	02/26/96	333.41	3.85	329.56	---	---	---	---	---	---	---	---	---	---	---
AW-4	05/23/96	333.41	5.17	328.24	---	---	---	---	---	---	---	---	---	---	---
AW-4	08/23/96	333.41	4.73	328.68	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	5.7	SPL



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11116  
 7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
AW-5	11/15/90	334.81	9.67	325.14	ND<50	---	1.3	ND<0.5	ND<0.5	1.0	---	---	---	---	ANA
AW-5	12/11/90	334.81	9.44	325.37	---	---	---	---	---	---	---	---	---	---	---
AW-5	02/15/91	334.81	10.00	324.81	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
AW-5	05/14/91	334.81	8.64	326.17	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
AW-5	08/23/91	334.81	9.58	325.23	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	ANA
AW-5	11/13/91	334.81	9.80	325.01	100	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SEQ
AW-5	02/25/92	334.81	7.89	326.92	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SEQ
AW-5	04/15/92	334.81	8.54	326.27	---	---	---	---	---	---	---	---	---	---	---
AW-5	06/03/92	334.81	8.97	325.84	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-5	08/12/92	334.81	9.73	325.08	61	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-5	11/10/92	334.81	10.27	324.54	99	---	ND<0.5	ND<0.5	ND<0.5	0.8	---	---	---	---	ANA
QC-1 (f)	11/10/92	---	---	---	86	---	ND<0.5	ND<0.5	ND<0.5	0.7	---	---	---	---	ANA
AW-5	02/10/93	334.81	7.29	327.52	82	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-5	05/21/93	334.81	7.77	327.04	---	---	---	---	---	---	---	---	---	---	---
AW-5	08/12/93	334.81	8.87	325.94	130	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
AW-5	11/11/93	334.81	9.13	325.68	---	---	---	---	---	---	---	---	---	---	---
AW-5	11/12/93	---	---	---	180	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
AW-5	02/11/94	334.81	8.20	326.61	210	---	16	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
AW-5	05/17/94	334.81	8.16	326.65	---	---	---	---	---	---	---	---	---	---	---
AW-5	06/20/94	334.81	8.26	326.55	1300	---	0.9	ND<0.5	0.5	2.2	---	---	---	2.5	PACE
AW-5	10/04/94	334.81	8.70	326.11	670	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.0	PACE
AW-5 (d)	11/18/94	334.81	8.20	326.61	640	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.1	PACE
QC-1 (f)	11/21/94	---	---	---	660	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
AW-5	02/15/95	334.81	6.65	328.16	220	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
AW-5	05/24/95	334.81	7.27	327.54	220	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	5.2	ATI
AW-5	08/29/95	334.81	8.70	326.11	190	---	ND<1.0	ND<1.0	ND<1.0	ND<2.0	---	---	---	8.5	ATI
AW-5	11/28/95	334.81	9.32	325.49	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	700	---	---	4.1	ATI
AW-5	02/26/96	334.81	7.13	327.68	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	670	---	---	8.1	SPL
AW-5	05/23/96	334.81	8.58	326.23	60	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	620	---	---	4.9	SPL
AW-5	08/23/96	334.81	8.18	326.63	520	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	520	---	---	5.1	SPL
QC-1 (f)	08/23/96	---	---	---	490	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	280	---	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11116  
 7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
AW-6	11/15/90	334.90	9.58	325.32	230	---	25	ND<0.5	ND<0.5	0.8	---	---	---	---	ANA
AW-6	12/11/90	334.90	9.58	325.32	---	---	---	---	---	---	---	---	---	---	---
AW-6	02/15/91	334.90	9.66	325.24	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
AW-6	05/14/91	334.90	8.38	326.52	90	---	2	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
AW-6	08/23/91	334.90	9.61	325.29	57	---	ND<0.5	0.7	1.3	4.6	---	---	---	---	ANA
AW-6	11/13/91	334.90	9.58	325.32	200	---	ND<0.3	ND<0.3	ND<0.3	0.94	---	---	---	---	SEQ
AW-6	02/25/92	334.90	8.00	326.90	19000	---	8000	4700	600	2400	---	---	---	---	SEQ
AW-6	03/05/92	334.90	7.98	326.92	14000	---	5200	2500	550	2200	---	---	---	---	SEQ
AW-6	04/15/92	334.90	8.33	326.57	1100	---	400	ND<3.0	30	ND<3.0	---	---	---	---	SEQ
AW-6	06/03/92	334.90	8.91	325.99	77	---	4.4	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-6	08/12/92	334.90	9.61	325.29	80	---	4.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
AW-6	11/10/92	334.90	10.10	324.80	450	---	120	2.1	4.5	9.7	---	---	---	---	ANA
AW-6	02/10/93	334.90	7.13	327.77	14000	---	610	17	15	720	---	---	---	---	PACE
QC-1 (f)	02/10/93	---	---	---	12000	---	520	15	13	610	---	---	---	---	PACE
AW-6	05/21/93	334.90	7.64	327.26	7900	---	900	ND<12	20	ND<12	---	---	---	---	PACE
QC-1 (f)	05/21/93	---	---	---	7500	---	620	ND<10	13	ND<10	---	---	---	---	PACE
AW-6	08/12/93	334.90	8.64	326.26	26000	---	450	14	250	48	---	---	---	---	PACE
QC-1 (f)	08/12/93	---	---	---	27000	---	510	43	270	42	---	---	---	---	PACE
AW-6	11/11/93	334.90	8.67	326.23	---	---	---	---	---	---	---	---	---	---	---
AW-6	11/12/93	---	---	---	62000	---	4600	420	310	1100	---	---	---	---	PACE
QC-1 (f)	11/12/93	---	---	---	63000	---	4100	360	290	1000	---	---	---	---	PACE
AW-6	02/11/94	334.90	8.04	326.86	140000	---	21000	25000	1100	13000	---	---	---	---	PACE
QC-1 (f)	02/11/94	---	---	---	110000	---	17000	21000	770	10000	---	---	---	---	PACE
AW-6	05/17/94	334.90	7.68	327.22	---	---	---	---	---	---	---	---	---	---	---
AW-6	06/20/94	334.90	7.82	327.08	42000	---	2700	1300	1900	9100	---	---	---	2.1	PACE
QC-1 (f)	06/20/94	---	---	---	41000	---	2800	1400	1900	8900	---	---	---	---	PACE
AW-6	10/04/94	334.90	9.33	325.57	14000	---	2100	77	1000	760	---	---	---	6.1	PACE
QC-1 (f)	10/04/94	---	---	---	14000	---	2100	77	1100	790	---	---	---	---	PACE
AW-6 (d)	11/18/94	334.90	7.17	327.73	50000	---	550	8500	2500	14000	---	---	---	3.3	PACE
AW-6	02/15/95	334.90	6.19	328.71	25000	---	53	1400	1200	4400	---	---	---	---	ATI
QC-1 (f)	02/15/95	---	---	---	25000	---	53	1400	1200	4400	---	---	---	---	ATI
AW-6	05/24/95	334.90	6.87	328.03	14000	---	730	140	570	1100	---	---	---	5.7	ATI
QC-1 (f)	05/24/95	---	---	---	15000	---	750	140	570	1100	---	---	---	---	ATI
AW-6	08/29/95	334.90	8.38	326.52	8300	---	430	ND<10	340	40	---	---	---	8.9	ATI
QC-1 (f)	08/29/95	---	---	---	9400	---	430	12	360	37	---	---	---	---	ATI
AW-6	11/28/95	334.90	9.20	325.70	4700	---	300	13	61	ND<20	3600	---	---	3.0	ATI
QC-1 (f)	11/28/95	---	---	---	5200	---	310	12	78	ND<20	3800	---	---	---	ATI
AW-6	02/26/96	334.90	5.78	329.12	3600	---	17	29	110	1100	68	---	---	8.0	SPL
QC-1 (f)	02/26/96	---	---	---	3600	---	17	28	100	1050	63	---	---	---	SPL
AW-6	05/23/96	334.90	6.94	327.96	1800	---	390	ND<2.5	76	49	560	---	---	5.2	SPL
QC-1 (f)	05/23/96	---	---	---	1800	---	380	ND<2.5	72	44	550	---	---	---	SPL
AW-6	08/23/96	334.90	6.50	328.40	2300	---	54	ND<1.0	ND<1.0	ND<1.0	4240	---	---	6.3	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11116  
 7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
QC-2	(g) 11/10/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
QC-2	(g) 02/10/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 05/21/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 08/12/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 11/12/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 02/11/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 06/20/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 10/04/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 11/21/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g) 02/15/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2	(g) 05/24/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2	(g) 08/29/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2	(g) 11/28/95	---	---	---	ND<50	---	ND<0.50	1.6	ND<0.50	1.2	ND<5.0	---	---	---	ATI
QC-2	(g) 02/26/96	---	---	---	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL
QC-2	(g) 05/23/96	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	---	SPL

ABBREVIATIONS

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
TOG	Total oil and grease
HVOC	Halogenated volatile organic compounds
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not applicable/analyzed/measured
ANA	Anametrx, Inc
SUP	Superior Analytical Laboratory
SEQ	Sequoia Analytical Laboratory
PACE	Pace, Inc
ATI	Analytical Technologies, Inc
SPL	Southern Petroleum Laboratories

NOTES:

- (a) Top of casing elevations surveyed in reference to the City of Dublin monument at the intersection of Village Parkway and Amador Valley Boulevard, with an elevation of 335.92 feet above mean sea level.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Methylene chloride.
- (d) Groundwater samples collected on November 21, 1994.
- (e) Well buried.
- (f) Blind duplicate.
- (g) Travel blank.

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 UNOCAL CORPORATION SERVICE STATION  
 7375 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l) (b)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (mg/l)	LAB
MW 1	08/12/92	336.72	11.32	325.40	---	---	---	---	---	---	---	---	---
MW 1	11/10/92	336.72	11.97	324.75	---	---	---	---	---	---	---	---	---
MW 1	02/10/93	336.72	8.53	328.09	---	---	---	---	---	---	---	---	---
MW 1	05/10/93	336.72	9.57	327.15	---	---	---	---	---	---	---	---	---
MW 1	08/12/93	336.72	10.65	326.17	---	---	---	---	---	---	---	---	---
MW 1	11/11/93	336.72	10.17	326.55	---	---	---	---	---	---	---	---	---
MW 1	02/11/94	336.07 (c)	9.72	326.35	---	---	---	---	---	---	---	---	---
MW 1	05/17/94	336.07	9.26	326.81	---	---	---	---	---	---	---	---	---
MW 1	08/25/94	336.07	10.58	325.49	---	---	---	---	---	---	---	---	---
MW 1	11/18/94	336.07	9.69	326.38	---	---	---	---	---	---	---	---	---
MW 1	02/15/95	336.07	7.80	328.27	---	---	---	---	---	---	---	---	---
MW 1	05/24/95	336.07	8.98	327.09	1300	---	28	ND<0.50	15	ND<0.50	---	---	SEQ
MW 1	08/25/95	336.07	9.68	326.39	530	2300	16	ND<0.50	22	13	---	---	SEQ
MW 1	11/28/95	336.07	10.45	325.62	650	---	15	ND<0.50	21	6.7	---	---	SEQ
MW 1	02/26/96	336.07	6.45	329.62	1900	---	40	ND<0.50	84	46	110	---	SEQ
MW 2	08/12/92	337.36	11.48	325.88	---	---	---	---	---	---	---	---	---
MW 2	11/10/92	337.36	12.15	325.21	---	---	---	---	---	---	---	---	---
MW 2	02/10/93	337.36	8.81	328.55	---	---	---	---	---	---	---	---	---
MW 2	05/10/93	337.36	9.75	327.61	---	---	---	---	---	---	---	---	---
MW 2	08/12/93	337.36	10.69	326.67	---	---	---	---	---	---	---	---	---
MW 2	11/11/93	337.36	10.51	326.85	---	---	---	---	---	---	---	---	---
MW 2	02/11/94	336.78 (c)	9.85	326.93	---	---	---	---	---	---	---	---	---
MW 2	05/17/94	336.78	9.31	327.47	---	---	---	---	---	---	---	---	---
MW 2	08/25/94	336.78	10.75	326.03	---	---	---	---	---	---	---	---	---
MW 2	11/18/94	336.78	9.95	326.83	---	---	---	---	---	---	---	---	---
MW 2	02/15/95	336.78	7.58	329.20	---	---	---	---	---	---	---	---	---
MW 2	05/24/95	336.78	8.33	328.45	---	---	---	---	---	---	---	---	---
MW 2	08/25/95	336.78	9.76	327.02	---	---	---	---	---	---	---	---	---
MW 2	11/28/95	336.78	10.65	326.13	---	---	---	---	---	---	---	---	---
MW 2	02/26/96	336.78	6.39	330.39	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---	---	SEQ
MW 3	08/12/92	337.53	11.64	325.89	---	---	---	---	---	---	---	---	---
MW 3	11/10/92	337.53	12.33	325.20	---	---	---	---	---	---	---	---	---
MW 3	02/10/93	337.53	8.95	328.58	---	---	---	---	---	---	---	---	---
MW 3	05/10/93	337.53	9.91	327.62	---	---	---	---	---	---	---	---	---
MW 3	08/12/93	337.53	10.89	326.64	---	---	---	---	---	---	---	---	---
MW 3	11/11/93	337.53	10.64	326.89	---	---	---	---	---	---	---	---	---
MW 3	02/11/94	336.99 (c)	10.01	326.97	---	---	---	---	---	---	---	---	---
MW 3	05/17/94	336.99	9.49	327.49	---	---	---	---	---	---	---	---	---
MW 3	08/25/94	336.98	10.93	326.05	---	---	---	---	---	---	---	---	---
MW 3	11/18/94	336.98	10.15	326.83	---	---	---	---	---	---	---	---	---
MW 3	02/15/95	336.98	7.62	329.36	---	---	---	---	---	---	---	---	---
MW 3	05/24/95	336.98	8.28	328.72	---	---	---	---	---	---	---	---	---
MW 3	08/25/95	336.98	10.03	326.95	---	---	---	---	---	---	---	---	---
MW 3	11/28/95	336.98	10.85	326.13	---	---	---	---	---	---	---	---	---
MW 3	02/26/96	336.98	6.39	330.59	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---	ND<5.0	SEQ

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
UNOCAL CORPORATION SERVICE STATION  
7375 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (mg/l)	LAB
MW 4	08/12/92	337.00	11.62	325.38	---	---	---	---	---	---	---	---	---
MW 4	11/10/92	337.00	12.32	324.68	---	---	---	---	---	---	---	---	---
MW 4	02/10/93	337.00	8.94	328.06	---	---	---	---	---	---	---	---	---
MW 4	05/10/93	337.00	9.90	327.10	---	---	---	---	---	---	---	---	---
MW 4	08/12/93	337.00	10.90	326.10	---	---	---	---	---	---	---	---	---
MW 4	11/11/93	337.00	10.48	326.52	---	---	---	---	---	---	---	---	---
MW 4	02/11/94	336.43	(c) 10.10	326.33	---	---	---	---	---	---	---	---	---
MW 4	05/17/94	336.43	9.63	326.80	---	---	---	---	---	---	---	---	---
MW 4	08/25/94	336.43	10.94	325.49	---	---	---	---	---	---	---	---	---
MW 4	11/18/94	336.43	10.10	326.33	---	---	---	---	---	---	---	---	---
MW 4	02/15/95	336.43	8.12	328.31	---	---	---	---	---	---	---	---	---
MW 4	05/24/95	336.43	8.68	327.75	---	---	---	---	---	---	---	---	---
MW 4	08/25/95	336.43	10.08	326.36	---	---	---	---	---	---	---	---	---
MW 4	11/28/95	336.43	10.81	325.62	---	---	---	---	---	---	---	---	---
MW 4	02/26/96	336.43	6.75	329.68	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---	---	SEQ
MW 5	02/11/94	335.96	(c) 10.08	325.88	---	---	---	---	---	---	---	---	---
MW 5	05/17/94	335.96	9.24	326.72	---	---	---	---	---	---	---	---	---
MW 5	08/25/94	335.96	10.43	325.53	---	---	---	---	---	---	---	---	---
MW 5	11/18/94	335.96	10.09	325.87	---	---	---	---	---	---	---	---	---
MW 5	02/15/95	335.96	7.76	328.20	---	---	---	---	---	---	---	---	---
MW 5	05/24/95	335.96	7.98	327.98	14000	---	2200	ND<0.50	2200	ND<0.50	---	---	SEQ
MW 5	08/25/95	335.96	9.57	326.39	3100	---	43	ND<0.50	590	8.4	---	---	SEQ
MW 5	11/28/95	335.96	10.33	325.63	6400	---	320	ND<0.50	720	ND<0.50	---	---	SEQ
MW 5	02/26/96	335.96	7.15	328.81	2800	1600 (d)	75	ND<0.50	180	ND<0.50	74	---	SEQ
MW 5	05/23/96	335.96	8.65	327.31	71	190 (d)	7.9	ND<0.50	3.4	ND<0.50	43	---	SEQ
MW 5	08/23/96	335.96	10.02	325.94	350	140 (d)	22	1.0	13	3.0	56	---	SEQ

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
TOG	Total oil and grease
ug/l	Micrograms per liter
mg/l	Milligrams per liter
ND	Not detected above reported detection limit
---	Not sampled/analyzed/available
SEQ	Sequoia Analytical Laboratory

NOTES:

- (a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Top of casing elevations surveyed to the nearest 0.01 foot relative to a brass disc stamped VL-PKAMVY 1997, on the westerly center island of Amador Valley Boulevard and Village Parkway, with an elevation of 337.40 feet above mean sea level.
- (d) Unidentified hydrocarbon <C15 considered to be gasoline and not diesel.

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TABLE 3 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 ARCO PRODUCTS SERVICE STATION 6041  
 7249 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	LAB
MW-1	11/10/92	336.56	11.74	324.82	---	---	---	---	---	---	---
MW-1	02/10/93	336.56	9.66	326.90	---	---	---	---	---	---	---
MW-1	05/10/93	336.56	9.50	327.06	---	---	---	---	---	---	---
MW-1 (c)	08/12/93	336.56	---	---	---	---	---	---	---	---	---
MW-1	11/11/93	336.56	10.70	325.86	---	---	---	---	---	---	---
MW-1	02/11/94	336.56	10.35	326.21	---	---	---	---	---	---	---
MW-1	05/27/94	336.56	10.40	326.16	---	---	---	---	---	---	---
MW-1 (c)	08/25/94	336.56	---	---	---	---	---	---	---	---	---
MW-1	11/18/94	336.56	10.25	326.31	---	---	---	---	---	---	---
MW-1	02/15/95	336.56	8.53	328.03	---	---	---	---	---	---	---
MW-1	05/24/95	336.56	9.00	327.56	---	---	---	---	---	---	---
MW-1	08/25/95	336.56	6.93	329.63	780	2	ND<1	2	2	2500	CAS
MW-1	11/28/95	336.56	11.01	325.55	570	2.2	ND<0.5	1.4	0.9	---	CAS
MW-1	02/26/96	336.56	7.35	329.21	---	---	---	---	---	---	---
MW-1	05/23/96	336.56	8.73	327.83	560	8.5	ND<1	1.1	ND<1	3900	CAS
MW-1	08/23/96	336.56	10.25	326.31	860	ND<1	ND<1	ND<4	2	5600	CAS
MW-2	11/10/92	334.80	10.12	324.68	---	---	---	---	---	---	---
MW-2	02/10/93	334.80	7.30	327.50	---	---	---	---	---	---	---
MW-2	05/10/93	334.80	7.40	327.40	---	---	---	---	---	---	---
MW-2 (c)	08/12/93	334.80	---	---	---	---	---	---	---	---	---
MW-2	11/11/93	334.80	9.02	325.78	---	---	---	---	---	---	---
MW-2	02/11/94	334.80	8.59	326.21	---	---	---	---	---	---	---
MW-2	05/27/94	334.80	8.51	326.29	---	---	---	---	---	---	---
MW-2 (c)	08/25/94	334.80	---	---	---	---	---	---	---	---	---
MW-2	11/18/94	334.80	8.70	326.10	---	---	---	---	---	---	---
MW-2	02/15/95	334.80	6.75	328.05	---	---	---	---	---	---	---
MW-2	05/24/95	334.80	6.88	327.92	---	---	---	---	---	---	---
MW-2	08/25/95	334.80	7.91	326.89	150	6	ND<1	1	ND<1	2700	CAS
MW-2	11/28/95	334.80	9.06	325.74	ND<50	ND<0.5	ND<0.5	ND<0.5	0.8	---	CAS
MW-2	02/26/96	334.80	6.65	328.15	---	---	---	---	---	---	---
MW-2	05/23/96	334.80	6.90	327.90	540	140	ND<2.5	13	ND<2.5	4600	CAS
MW-2	08/23/96	334.80	8.45	326.35	180	0.8	2	0.7	2.6	4000	CAS

TABLE 3 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 ARCO PRODUCTS SERVICE STATION 6041  
 7249 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	LAB
MW-3	11/10/92	335.53	10.72	324.81	---	---	---	---	---	---	---
MW-3	02/10/93	335.53	7.87	327.66	---	---	---	---	---	---	---
MW-3	05/10/93	335.53	9.91	325.62	---	---	---	---	---	---	---
MW-3 (c)	08/12/93	335.53	---	---	---	---	---	---	---	---	---
MW-3	11/11/93	335.53	9.81	325.72	---	---	---	---	---	---	---
MW-3	02/11/94	335.53	9.60	325.93	---	---	---	---	---	---	---
MW-3	05/27/94	335.53	9.51	326.02	---	---	---	---	---	---	---
MW-3 (c)	08/25/94	335.53	---	---	---	---	---	---	---	---	---
MW-3	11/18/94	335.53	9.79	325.74	---	---	---	---	---	---	---
MW-3	02/15/95	335.53	8.55	326.98	---	---	---	---	---	---	---
MW-3	05/24/95	335.53	8.17	327.36	---	---	---	---	---	---	---
MW-3	08/25/95	335.53	9.27	326.26	210	3.6	ND<0.5	2.9	0.6	20000	CAS
MW-3	11/28/95	335.53	9.91	325.62	81	1.5	ND<0.5	1.4	ND<0.5	15000	CAS
MW-3	02/26/96	335.53	8.42	327.11	---	---	---	---	---	---	---
MW-3	05/23/96	335.53	7.70	327.83	6500	690	ND<10	120	14	8600	CAS
MW-3	08/23/96	335.53	9.25	326.28	1700	85	2.1	61	5.3	11000	CAS
MW-4	11/10/92	334.22	9.58	324.64	---	---	---	---	---	---	---
MW-4	02/10/93	334.22	6.80	327.42	---	---	---	---	---	---	---
MW-4	05/10/93	334.22	9.90	324.32	---	---	---	---	---	---	---
MW-4 (c)	08/12/93	334.22	---	---	---	---	---	---	---	---	---
MW-4	11/11/93	334.22	8.48	325.74	---	---	---	---	---	---	---
MW-4	02/11/94	334.22	8.15	326.07	---	---	---	---	---	---	---
MW-4	05/27/94	334.22	7.83	326.39	---	---	---	---	---	---	---
MW-4 (c)	08/25/94	334.22	---	---	---	---	---	---	---	---	---
MW-4	11/18/94	334.22	8.31	325.91	---	---	---	---	---	---	---
MW-4	02/15/95	334.22	7.85	326.37	---	---	---	---	---	---	---
MW-4	05/24/95	334.22	6.68	327.54	---	---	---	---	---	---	---
MW-4	08/25/95	334.22	6.93	327.29	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<3	CAS
MW-4	11/28/95	334.22	8.21	326.01	---	---	---	---	---	---	---
MW-4	02/26/96	334.22	6.65	327.57	---	---	---	---	---	---	---
MW-4	05/23/96	334.22	6.47	327.75	---	---	---	---	---	---	---
MW-4	08/23/96	334.22	7.66	326.56	---	---	---	---	---	---	---

TABLE 3 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 ARCO PRODUCTS SERVICE STATION 6041  
 7249 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	LAB
MW-5	11/10/92	335.87	11.02	324.85	---	---	---	---	---	---	---
MW-5	02/10/93	335.87	8.00	327.87	---	---	---	---	---	---	---
MW-5	05/10/93	335.87	8.64	327.23	---	---	---	---	---	---	---
MW-5 (c)	08/12/93	335.87	---	---	---	---	---	---	---	---	---
MW-5	11/11/93	335.87	10.09	325.78	---	---	---	---	---	---	---
MW-5	02/11/94	335.87	9.63	326.24	---	---	---	---	---	---	---
MW-5	05/27/94	335.87	9.60	326.27	---	---	---	---	---	---	---
MW-5 (c)	08/25/94	335.87	---	---	---	---	---	---	---	---	---
MW-5	11/18/94	335.87	9.65	326.22	---	---	---	---	---	---	---
MW-5	02/15/95	335.87	7.80	328.07	---	---	---	---	---	---	---
MW-5	05/24/95	335.87	8.10	327.77	---	---	---	---	---	---	---
MW-5	08/25/95	335.87	9.43	326.44	---	---	---	---	---	---	---
MW-5	11/28/95	335.87	10.12	325.75	---	---	---	---	---	---	---
MW-5	02/26/96	335.87	6.73	329.14	---	---	---	---	---	---	---
MW-5	05/23/96	335.87	7.87	328.00	---	---	---	---	---	---	---
MW-5	08/23/96	335.87	9.46	326.41	---	---	---	---	---	---	---
MW-6	11/10/92	335.84	11.03	324.81	---	---	---	---	---	---	---
MW-6	02/10/93	335.84	8.22	327.62	---	---	---	---	---	---	---
MW-6	05/10/93	335.84	8.85	326.99	---	---	---	---	---	---	---
MW-6 (c)	08/12/93	335.84	---	---	---	---	---	---	---	---	---
MW-6	11/11/93	335.84	10.02	325.82	---	---	---	---	---	---	---
MW-6	02/11/94	335.84	9.66	326.18	---	---	---	---	---	---	---
MW-6	05/27/94	335.84	9.69	326.15	---	---	---	---	---	---	---
MW-6 (c)	08/25/94	335.84	---	---	---	---	---	---	---	---	---
MW-6	11/18/94	335.84	9.54	326.30	---	---	---	---	---	---	---
MW-6	02/15/95	335.84	7.81	328.03	---	---	---	---	---	---	---
MW-6	05/24/95	335.84	8.35	327.49	---	---	---	---	---	---	---
MW-6	08/25/95	335.84	9.71	326.13	---	---	---	---	---	---	---
MW-6	11/28/95	335.84	10.28	325.56	---	---	---	---	---	---	---
MW-6	02/26/96	335.84	6.60	329.24	---	---	---	---	---	---	---
MW-6	05/23/96	335.84	8.05	327.79	---	---	---	---	---	---	---
MW-6	08/23/96	335.84	9.58	326.26	---	---	---	---	---	---	---

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 MTBE Methyl tert butyl ether  
 ug/l Micrograms per liter  
 --- Not analyzed/applicable/measured  
 ND Not detected above reported detection limit  
 CAS Columbia Analytical Services, Inc.

NOTES:

- (a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level
- (b) Groundwater elevations in feet above mean sea level.
- (c) Data not available.



TABLE 4 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 SHELL OIL COMPANY SERVICE STATION  
 7194 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL (D)	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
MW-1	08/12/92	334.83	9.15	325.68	---	---	---	---	---	---
MW-1	11/10/92	334.83	10.04	324.79	---	---	---	---	---	---
MW-1	02/10/93	334.83	7.24	327.59	---	---	---	---	---	---
MW-1	05/10/93	334.83	7.78	327.05	---	---	---	---	---	---
MW-1	08/12/93	334.83	8.54	326.29	---	---	---	---	---	---
MW-1	11/11/93	334.83	8.56	326.27	---	---	---	---	---	---
MW-1	02/11/94	334.83	8.62	326.21	---	---	---	---	---	---
MW-1	05/17/94	334.83	7.96	326.87	---	---	---	---	---	---
MW-1	08/25/94	334.83	9.24	325.59	---	---	---	---	---	---
MW-1	11/23/94	334.83	8.74	326.09	---	---	---	---	---	---
MW-1	02/15/95	334.83	6.84	327.99	---	---	---	---	---	---
MW-1	05/24/95	334.83	7.91	326.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-1	08/25/95	334.83	8.11	326.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-1	08/23/96	334.83	8.23	326.60	---	---	---	---	---	---
MW-2	08/12/92	336.96	11.58	325.38	---	---	---	---	---	---
MW-2	11/10/92	336.96	12.05	324.91	---	---	---	---	---	---
MW-2	02/10/93	336.96	9.28	327.68	---	---	---	---	---	---
MW-2	05/10/93	336.96	9.65	327.31	---	---	---	---	---	---
MW-2	08/12/93	336.96	10.70	326.26	---	---	---	---	---	---
MW-2	11/11/93	336.96	11.36	325.60	---	---	---	---	---	---
MW-2	02/11/94	336.96	11.04	325.92	---	---	---	---	---	---
MW-2	05/17/94	336.96	10.29	326.67	---	---	---	---	---	---
MW-2	08/25/94	336.96	11.29	325.87	---	---	---	---	---	---
MW-2	11/23/94	336.96	10.92	326.04	---	---	---	---	---	---
MW-2	02/15/95	336.96	8.90	328.06	---	---	---	---	---	---
MW-2	05/24/95	336.96	10.02	326.94	70	3.9	ND<0.5	1.4	ND<0.5	NET
MW-2	08/25/95	336.96	10.24	326.72	ND<50	20	ND<0.5	ND<0.5	ND<0.5	NET
MW-2	08/23/96	336.96	10.29	326.67	---	---	---	---	---	---
MW-3	08/12/92	336.93	10.94	325.99	---	---	---	---	---	---
MW-3	11/10/92	336.93	11.84	325.09	---	---	---	---	---	---
MW-3	02/10/93	336.93	8.82	328.11	---	---	---	---	---	---
MW-3	05/10/93	336.93	8.88	328.05	---	---	---	---	---	---
MW-3	08/12/93	336.93	10.36	326.57	---	---	---	---	---	---
MW-3	11/11/93	336.93	10.64	326.29	---	---	---	---	---	---
MW-3	02/11/94	336.93	10.68	326.25	---	---	---	---	---	---
MW-3	05/17/94	336.93	9.92	327.01	---	---	---	---	---	---
MW-3	08/25/94	336.93	11.30	325.63	---	---	---	---	---	---
MW-3	11/23/94	336.93	10.48	326.45	---	---	---	---	---	---
MW-3	02/15/95	336.93	8.35	328.58	---	---	---	---	---	---
MW-3	05/24/95	336.93	9.67	327.26	380	200	1.7	ND<0.5	0.8	NET
MW-3	08/25/95	336.93	9.36	327.57	70	22	ND<0.5	4.1	ND<0.5	NET
MW-3	08/23/96	336.93	10.00	326.93	---	---	---	---	---	---

TABLE 4 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 SHELL OIL COMPANY SERVICE STATION  
 7194 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
MW-4	08/12/92	337.14	11.36	325.78	---	---	---	---	---	---
MW-4	11/10/92	337.14	12.12	325.02	---	---	---	---	---	---
MW-4	02/10/93	337.14	9.40	327.74	---	---	---	---	---	---
MW-4	05/10/93	337.14	9.54	327.60	---	---	---	---	---	---
MW-4	08/12/93	337.14	10.68	326.46	---	---	---	---	---	---
MW-4	11/11/93	337.14	11.97	325.17	---	---	---	---	---	---
MW-4	02/11/94	337.14	10.71	326.43	---	---	---	---	---	---
MW-4	05/17/94	337.14	10.30	326.84	---	---	---	---	---	---
MW-4	08/25/94	337.14	10.84	326.30	---	---	---	---	---	---
MW-4	11/23/94	337.14	10.78	326.36	---	---	---	---	---	---
MW-4	02/15/95	337.14	9.49	327.65	---	---	---	---	---	---
MW-4	05/24/95	337.14	10.73	326.41	---	---	---	---	---	---
MW-4	08/25/95	337.14	10.22	326.92	ND<50	2.4	ND<0.5	ND<0.5	ND<0.5	NET
MW-4	08/23/96	337.14	9.84	327.30	---	---	---	---	---	---
MW-5	08/12/92	334.96	9.40	325.56	---	---	---	---	---	---
MW-5	11/10/92	334.96	9.65	325.31	---	---	---	---	---	---
MW-5	02/10/93	334.96	7.97	326.99	---	---	---	---	---	---
MW-5	05/10/93	334.96	7.76	327.20	---	---	---	---	---	---
MW-5	08/12/93	334.96	8.75	326.21	---	---	---	---	---	---
MW-5	11/11/93	334.96	9.32	325.64	---	---	---	---	---	---
MW-5	02/11/94	334.96	8.97	325.99	---	---	---	---	---	---
MW-5	05/17/94	334.96	8.12	326.84	---	---	---	---	---	---
MW-5	08/25/94	334.96	9.19	325.77	---	---	---	---	---	---
MW-5	11/23/94	334.96	8.78	326.18	---	---	---	---	---	---
MW-5	02/15/95	334.96	6.88	328.08	---	---	---	---	---	---
MW-5	05/24/95	334.96	8.04	326.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-5	08/25/95	334.96	8.34	326.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-6	08/12/92	335.42	9.72	325.70	---	---	---	---	---	---
MW-6	11/10/92	335.42	10.56	324.86	---	---	---	---	---	---
MW-6	02/10/93	335.42	7.65	327.77	---	---	---	---	---	---
MW-6	05/10/93	335.42	8.10	327.32	---	---	---	---	---	---
MW-6	08/12/93	335.42	9.18	326.24	---	---	---	---	---	---
MW-6	11/11/93	335.42	9.38	326.04	---	---	---	---	---	---
MW-6	02/11/94	335.42	9.02	326.40	---	---	---	---	---	---
MW-6	05/17/94	335.42	8.58	326.84	---	---	---	---	---	---
MW-6	08/25/94	335.42	9.79	325.63	---	---	---	---	---	---
MW-6	11/23/94	335.42	9.20	326.22	---	---	---	---	---	---
MW-6	02/15/95	335.42	7.36	328.06	---	---	---	---	---	---
MW-6	05/24/95	335.42	8.80	326.62	280	22	ND<0.5	ND<0.5	ND<0.5	NET
QC-1 (c)	05/24/95	---	---	---	330	25	ND<0.5	ND<0.5	ND<0.5	NET
MW-6	08/25/95	335.42	8.50	326.92	150	16	3.2	9.1	4.0	NET
MW-6	08/23/96	335.42	8.88	326.54	---	---	---	---	---	---

TABLE 4 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 SHELL OIL COMPANY SERVICE STATION  
 7194 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL (I)	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
MW-7	08/12/92	333.23	8.65	324.58	---	---	---	---	---	---
MW-7	11/10/92	333.23	8.82	324.41	---	---	---	---	---	---
MW-7	02/10/93	333.23	6.06	327.17	---	---	---	---	---	---
MW-7	05/10/93	333.23	6.65	326.58	---	---	---	---	---	---
MW-7	08/12/93	333.23	6.83	326.40	---	---	---	---	---	---
MW-7	11/11/93	333.23	6.90	326.33	---	---	---	---	---	---
MW-7	02/11/94	333.23	6.12	327.11	---	---	---	---	---	---
MW-7	05/17/94	333.23	6.06	327.17	---	---	---	---	---	---
MW-7	08/25/94	333.23	6.76	326.47	---	---	---	---	---	---
MW-7	11/23/94	333.23	6.75	326.48	---	---	---	---	---	---
MW-7	02/15/95	333.23	5.40	327.83	---	---	---	---	---	---
MW-7	05/24/95	333.23	6.82	326.41	---	---	---	---	---	---
MW-7	08/25/95	333.23	6.46	326.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-8	08/12/92	335.80	9.82	325.98	---	---	---	---	---	---
MW-8	11/10/92	335.80	10.41	325.39	---	---	---	---	---	---
MW-8	02/10/93	335.80	7.35	328.45	---	---	---	---	---	---
MW-8	05/10/93	335.80	6.65	329.15	---	---	---	---	---	---
MW-8	08/12/93	335.80	6.83	328.97	---	---	---	---	---	---
MW-8	11/11/93	335.80	6.90	328.90	---	---	---	---	---	---
MW-8	02/11/94	335.80	6.12	329.68	---	---	---	---	---	---
MW-8	05/17/94	335.80	6.06	329.74	---	---	---	---	---	---
MW-8	08/25/94	335.80	6.76	329.04	---	---	---	---	---	---
MW-8	11/23/94	335.80	6.75	329.05	---	---	---	---	---	---
MW-8	02/15/95	335.80	5.40	330.40	---	---	---	---	---	---
MW-8	05/24/95	335.80	7.56	328.24	---	---	---	---	---	---
MW-8	08/25/95	335.80	8.60	327.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-9	08/12/92	334.57	8.97	325.60	---	---	---	---	---	---
MW-9	11/10/92	334.57	8.97	325.60	---	---	---	---	---	---
MW-9	02/10/93	334.57	7.20	327.37	---	---	---	---	---	---
MW-9	05/10/93	334.57	7.56	327.01	---	---	---	---	---	---
MW-9	08/12/93	334.57	8.25	326.32	---	---	---	---	---	---
MW-9	11/11/93	334.57	10.30	324.27	---	---	---	---	---	---
MW-9	02/11/94	334.57	8.88	325.69	---	---	---	---	---	---
MW-9	05/17/94	334.57	8.06	326.51	---	---	---	---	---	---
MW-9	08/25/94	334.57	8.79	325.78	---	---	---	---	---	---
MW-9	11/23/94	334.57	8.65	325.92	---	---	---	---	---	---
MW-9	02/15/95	334.57	7.36	327.21	---	---	---	---	---	---
MW-9	05/24/95	334.57	7.75	326.82	---	---	---	---	---	---
MW-9	08/25/95	334.57	7.90	326.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET

TABLE 4 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
 SHELL OIL COMPANY SERVICE STATION  
 7194 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL (f)	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
MW-10 (d)	---	---	---	---	---	---	---	---	---	---
MW-11	08/12/92	334.20	8.75	325.45	---	---	---	---	---	---
MW-11	11/10/92	334.20	9.47	324.73	---	---	---	---	---	---
MW-11	02/10/93	334.20	6.79	327.41	---	---	---	---	---	---
MW-11	05/10/93	334.20	7.18	327.02	---	---	---	---	---	---
MW-11	08/12/93	334.20	8.10	326.10	---	---	---	---	---	---
MW-11	11/11/93	334.20	8.56	325.64	---	---	---	---	---	---
MW-11	02/11/94	334.20	8.21	325.99	---	---	---	---	---	---
MW-11	05/17/94	334.20	7.61	326.59	---	---	---	---	---	---
MW-11	08/25/94	334.20	8.68	325.52	---	---	---	---	---	---
MW-11	11/23/94	334.20	8.27	325.93	---	---	---	---	---	---
MW-11	02/15/95	334.20	6.46	327.74	---	---	---	---	---	---
MW-11	05/24/95	334.20	7.69	326.51	---	---	---	---	---	---
MW-11	08/25/95	334.20	7.70	326.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET
MW-12	08/12/92	332.53	9.83	322.70	---	---	---	---	---	---
MW-12	11/10/92	332.53	8.32	324.21	---	---	---	---	---	---
MW-12	02/10/93	332.53	6.75	325.78	---	---	---	---	---	---
MW-12 (e)	05/10/93	332.53	---	332.53	---	---	---	---	---	---
MW-12	08/12/93	332.53	6.23	326.30	---	---	---	---	---	---
MW-12	11/11/93	332.53	7.43	325.10	---	---	---	---	---	---
MW-12	02/04/94	332.53	7.18	325.35	---	---	---	---	---	---
MW-12	05/17/94	332.53	6.80	325.73	---	---	---	---	---	---
MW-12	08/25/94	332.53	7.24	325.29	---	---	---	---	---	---
MW-12	11/23/94	332.53	7.16	325.37	---	---	---	---	---	---
MW-12	02/15/95	332.53	5.16	327.37	---	---	---	---	---	---
MW-12	05/24/95	332.53	6.95	325.58	---	---	---	---	---	---
MW-12	08/25/95	332.53	5.63	326.90	---	---	---	---	---	---

TABLE 4 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING  
SHELL OIL COMPANY SERVICE STATION  
7194 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
MW-13	08/12/92	335.64	10.91	324.73	---	---	---	---	---	---
MW-13	11/10/92	335.64	10.69	324.95	---	---	---	---	---	---
MW-13	02/10/93	335.64	7.49	328.15	---	---	---	---	---	---
MW-13	05/10/93	335.64	8.06	327.58	---	---	---	---	---	---
MW-13	08/12/93	335.64	8.73	326.91	---	---	---	---	---	---
MW-13	11/11/93	335.64	9.15	326.49	---	---	---	---	---	---
MW-13	02/11/94	335.64	9.12	326.52	---	---	---	---	---	---
MW-13	05/17/94	335.64	8.62	327.02	---	---	---	---	---	---
MW-13	08/25/94	335.64	9.32	326.32	---	---	---	---	---	---
MW-13	11/23/94	335.64	9.37	326.27	---	---	---	---	---	---
MW-13	02/15/95	335.64	8.42	327.22	---	---	---	---	---	---
MW-13	05/24/95	335.64	9.90	325.74	230	32	1.2	1.1	2.5	NET
MW-13	08/25/95	335.64	8.32	327.32	930	320	17	48	36	NET
MW-13	08/23/96	335.64	8.66	326.98	---	---	---	---	---	---
RW-1 (f)	02/11/94	336.19	9.98	326.21	---	---	---	---	---	---
RW-1 (f)	05/17/94	336.19	9.29	326.90	---	---	---	---	---	---
RW-1 (f)	08/25/94	336.19	10.56	325.63	---	---	---	---	---	---
RW-1 (f)	11/23/94	336.19	10.07	326.12	---	---	---	---	---	---
RW-1 (f)	02/15/95	336.19	8.20	327.99	---	---	---	---	---	---
RW-1 (f)	05/24/95	336.19	9.66	326.53	---	---	---	---	---	---
RW-1 (f)	08/25/95	336.19	9.37	326.82	---	---	---	---	---	---
QC-2 (g)	05/24/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NET

ABBREVIATIONS:

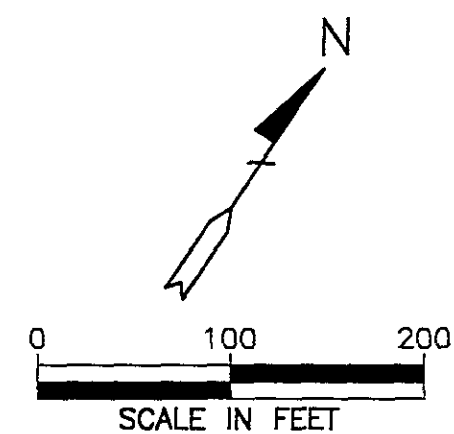
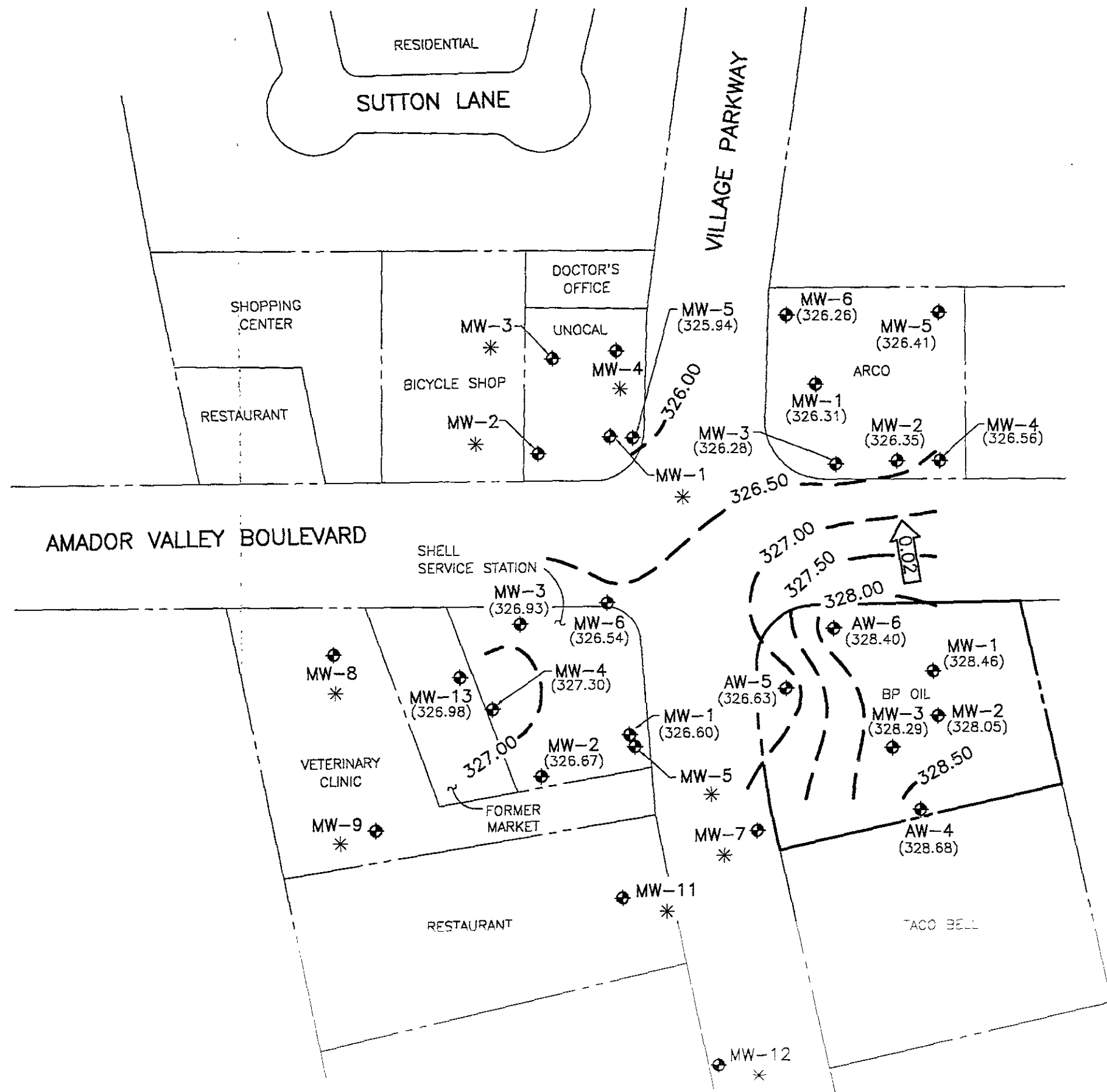
TPH-G Total petroleum hydrocarbons as gasoline  
B Benzene  
T Toluene  
E Ethylbenzene  
X Total xylenes  
ug/l Micrograms per liter  
ND Not detected above reported detection limit  
--- Not analyzed/available  
NET National Environmental Testing, Inc.

NOTES:

- (a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Blind duplicate.
- (d) Monitoring Well MW-10 was destroyed.
- (e) Well inaccessible due to parked car.
- (f) Location of well is unknown.
- (g) Trip blank.

FN010-01 A017-6-1C.WQ2

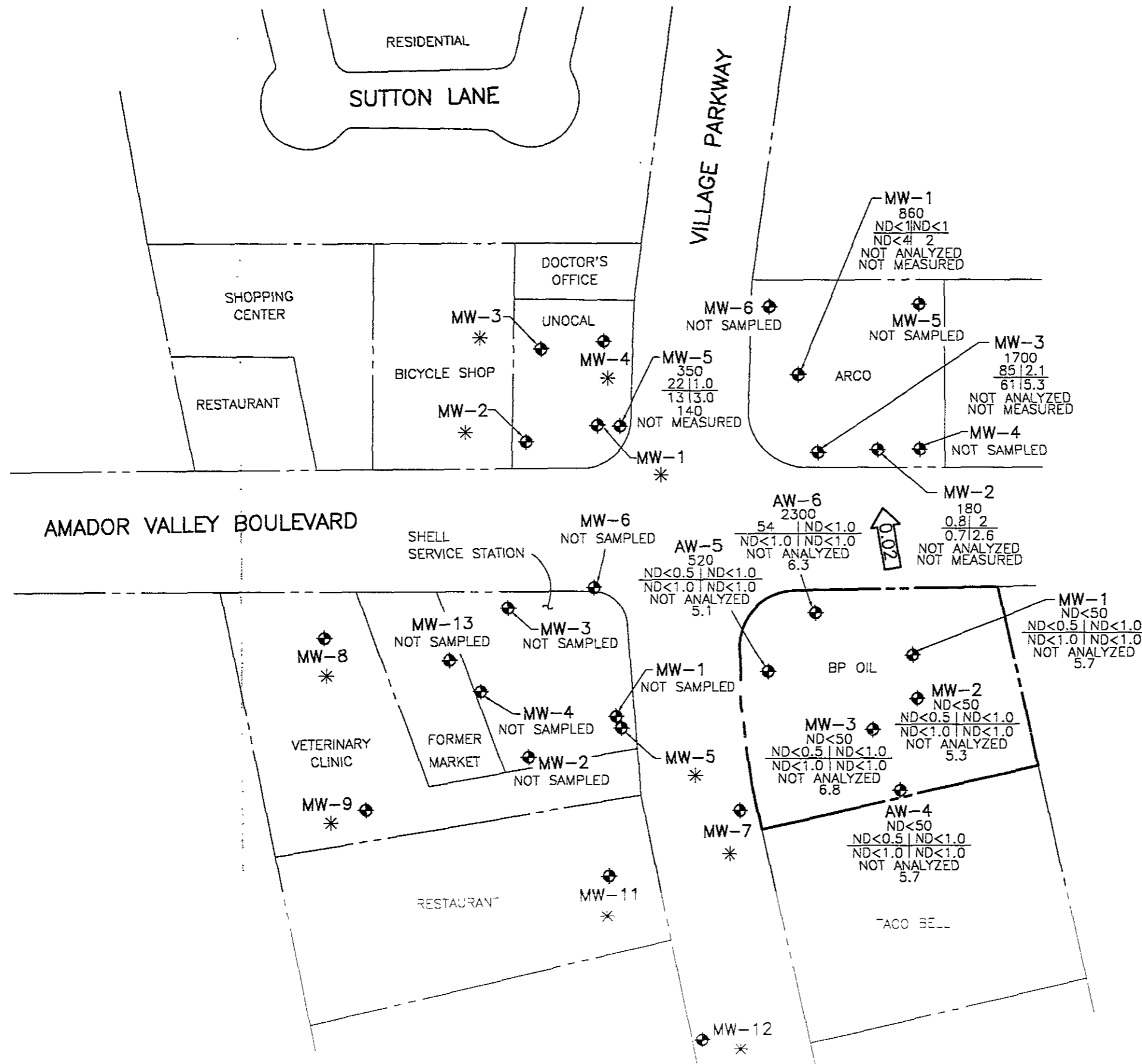




- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
  - (328.05) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
  - 328.50 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL=0.50 FOOT)
  - ← 0.02 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT
  - \* DATA NOT AVAILABLE

**FIGURE 2**  
**POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP**  
 AUGUST 23, 1996  
 BP OIL SERVICE STATION NO. 11116  
 7197 VILLAGE PARKWAY  
 DUBLIN, CALIFORNIA  
 PROJECT NO. 10-017

10017101 5 DWG 10 10 98 010M 1-108



**LEGEND**

- ◆ GROUNDWATER MONITORING WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
- B | T BENZENE | TOLUENE
- E | X ETHYLBENZENE | TOTAL XYLENES
- TPH-D TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- DO DISSOLVED OXYGEN
- ND NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- ← 0.02 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT
- \* DATA NOT AVAILABLE

**FIGURE 3**  
**CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER**  
**AUGUST 23, 1996**  
BP OIL SERVICE STATION NO. 11116  
7197 VILLAGE PARKWAY  
DUBLIN, CALIFORNIA  
PROJECT NO. 10-017

DRAWN BY: S. DING TO: 10-017-001 1-1-00



APPENDIX A  
WATER SAMPLING FIELD SURVEY FORMS

# ALISTO

## Field Report / Sampling Data Sheet

ENGINEERING  
GROUP

1575 TREAT BOULEVARD, SUITE 201  
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-017-05-002 <sup>old/001</sup>  
Address 7197 Village Parkway  
Contract No. G602087  
Station No. BP 11116  
Date: 8/23/96  
Day: MTWTF  
City: Dublin  
Sampler: LB

### DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME Monitored SAMPLED	COMMENTS:
MW-1	SEM1 S-1	2"	25.90	6.71	Ø	1005	
MW-2	SEM1 S-2	↓	25.45	6.53	↓	1008	
MW-3	SEM1 S-3	↓	25.90	6.84	↓	1010	
AW-4	S-4	4"	34.15	4.73	↓	1025	
AW-5	S-5	↓	37.90	8.18	↓	1027	S-7 (QC-1) From this well
AW-6	S-6	↓	16.50	6.50	↓	1030	

### FIELD INSTRUMENT CALIBRATION DATA

pH METER Agua check 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED  N TIME \_\_\_\_\_ WEATHER Clear

D.O. METER Agua check ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 67

CONDUCTIVITY METER Agua check 10,000 TURBIDITY METER \_\_\_\_\_ 5.0 NTU OTHER X

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-1	6.71	2"	OK	Ø	Y <input checked="" type="radio"/>	3	1056	68.3	7.41	1.11ms	5.1	<input type="radio"/> EPA 601
Total Depth - Water Level =						6		67.4	7.22	1.03ms		<input checked="" type="radio"/> TPH-G/BTEX <u>Hel</u>
25.90 - 6.71 = 19.19 x .16 = 3.07 x 3 = 9.21						9.5	1107	66.9	7.17	1.01ms	5.7	<input type="radio"/> TPH Diesel
Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1111

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-2	6.53	2"	OK	Ø	Y <input checked="" type="radio"/>	3	1122	69.1	7.92	1.71ms	4.7	<input type="radio"/> EPA 601
Total Depth - Water Level =						6		68.4	7.70	1.66ms		<input checked="" type="radio"/> TPH-G/BTEX <u>Hel</u>
25.45 - 6.53 = 18.92 x .16 = 3.03 x 3 = 9.09						9.5	1130	67.8	7.63	1.66ms	5.3	<input type="radio"/> TPH Diesel
Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1134

# ALISTO

## Field Report / Sampling Data Sheet

ENGINEERING  
GROUP

1575 TREAT BOULEVARD, SUITE 201  
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-017-05-002  
Address 7197 Village Parkway  
Contract No. G602087  
Station No. BP 11116

Date: 8/23/96  
Day: M T W T F  
City: Dublin  
Sampler: LCB

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
Mw-3	6.84	2"	OK	Ø	Y (N)	3	1245	70.7	7.77	1.2ms	6.6
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge PurgeVol.						6		68.7	7.43	1.10ms	
25.90 - 6.84 = 19.06 x .16 = 3.05 x 3 = 9.15						9.5	1253	68.0	7.39	1.07ms	6.8
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port											
Comments:											

- EPA 601
  - TPH-G/BTEX HCL
  - TPH Diesel
  - TOG 5520
  - TIME/SAMPLE ID
- 1300

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
Mw-4	4.73	4"	OK	Ø	Y (N)	20	1307	68.7	7.36	1.79ms	4.9
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge PurgeVol.						40		68.0	7.17	1.61ms	
34.15 - 4.73 = 29.42 x .65 = 19.12 x 3 = 57.36						57.5	1333	67.3	7.09	1.56ms	5.7
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port											
Comments:											

- EPA 601
  - TPH-G/BTEX HCL
  - TPH Diesel
  - TOG 5520
  - TIME/SAMPLE ID
- 1346

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
Mw-5	8.18	4"	OK	Ø	Y (N)	16	1352	70.2	7.07	2.07ms	4.6
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge PurgeVol.						32		68.3	6.92	1.92ms	
32.90 - 8.18 = 24.72 x .65 = 16.07 x 3 = 48.21						48.5	1422	67.1	6.79	1.88ms	5.1
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port											
Comments: OC-1 5-7 From this well											

- EPA 601
  - TPH-G/BTEX HCL
  - TPH Diesel
  - TOG 5520
  - TIME/SAMPLE ID
- 1427

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
Mw-6	6.50	4"	OK	Ø	Y (N)	6	1439	70.1	7.88	1.07ms	7.7
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge PurgeVol.						12		68.7	7.70	.97ms	
16.50 - 6.50 = 10 x .65 = 6.5 x 3 = 19.5						19.5	1455	68.2	7.63	1.00ms	6.3
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port											
Comments: <del>OC-1 5-7 From this well</del>											

- EPA 601
  - TPH-G/BTEX HCL
  - TPH Diesel
  - TOG 5520
  - TIME/SAMPLE ID
- 1507

**APPENDIX B**

**LABORATORY REPORT AND CHAIN OF CUSTODY RECORD**



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-08-E71

Approved for Release by:

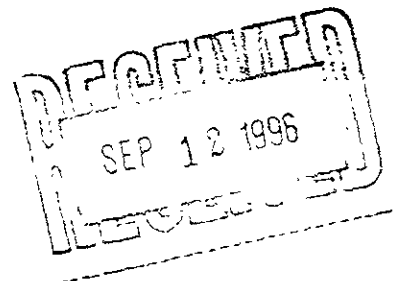
  
Ed Fry, Project Manager

9/7/96  
Date:

for

Greg Grandits  
Laboratory Director

Idelis Williams  
Quality Assurance Officer



The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

## CASE NARRATIVE

### QUALITY CONTROL RESULTS SUMMARY

WORK ORDER NO(S): 96-08-E71

Southern Petroleum Laboratories (SPL) is pleased to present the results of laboratory analyses to Allisto Engineering regarding BP site #11116. Seven water samples were received at our laboratory on August 29, 1996 at a temperature of 3 degrees Celsius. The following is a brief narrative of the laboratory analyses.

These samples were analyzed per the Chain of Custody. There were no deviations from the required methodology.

SPL uses two surrogates to monitor purging efficiency for the analysis of BTEX and Gasoline Range Organics. The surrogate 4-Bromofluorobenzene was above the quality control limits for sample "S-5" in both analyses due to matrix interferences. However the surrogate 1,4-Difluorobenzene was well within quality control limits.

If you have any comments or suggestions please feel free to contact me at (713) 660-0901.

A handwritten signature in black ink, appearing to read 'Brent Barron', is written over a horizontal line.

Brent Barron  
Client Services Supervisor





Certificate of Analysis No. H9-9608E71-02

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

BP Oil Company
295 SW 41st St, Bldg 13, Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
G602087, COC#084355
DATE: 09/07/96

PROJECT: BP Oil #11116
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-017-6-1
MATRIX: WATER
DATE SAMPLED: 08/23/96
DATE RECEIVED: 08/29/96

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include MTBE, Benzene, Toluene, Ethylbenzene, Total Xylene.

Surrogate % Recovery
1,4-Difluorobenzene 100
4-Bromofluorobenzene 110
METHOD 8020\*\*\*
Analyzed by: VHZ
Date: 09/01/96

Total Petroleum Hydrocarbons-Gasoline ND 0.05 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 90
4-Bromofluorobenzene 127
CA LUFT - Gasoline
Analyzed by: VHZ
Date: 09/01/96 07:31:00

ND - Not detected. (P) - Practical Quantitation Limit

Notes: \*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
\*\*Ref: Standard Methods for Examination of Water & Wastewater, 18th ed
\*\*\*Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance
with EPA guidelines for quality assurance.
SPL California License # 1903





HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9608E71-03

BP Oil Company  
 295 SW 41st St, Bldg 13, Ste N  
 Renton, WA 98055  
 ATTN: Scott Hooton

P.O.#  
 G602087 , COC#084355  
 DATE: 09/07/96

PROJECT: BP Oil #11116  
 SITE: Dublin, CA  
 SAMPLED BY: Alisto Engineering  
 SAMPLE ID: S-3

PROJECT NO: 10-017  
 MATRIX: WATER  
 DATE SAMPLED: 08/23/96  
 DATE RECEIVED: 08/29/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene

97

4-Bromofluorobenzene

107

METHOD 8020\*\*\*

Analyzed by: VHZ

Date: 09/01/96

Total Petroleum Hydrocarbons-Gasoline

ND

0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

90

4-Bromofluorobenzene

133

CA LUFT - Gasoline

Analyzed by: VHZ

Date: 09/01/96 07:58:00

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: \*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA  
 \*\*Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.  
 \*\*\*Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

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Certificate of Analysis No. H9-9608E71-04

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

BP Oil Company  
295 SW 41st St, Bldg 13, Ste N  
Renton, WA 98055  
ATTN: Scott Hooton

P.O.#  
G602087 , COC#084355  
DATE: 09/07/96

PROJECT: BP Oil #11116  
SITE: Dublin, CA  
SAMPLED BY: Alisto Engineering  
SAMPLE ID: S-4

PROJECT NO: 10-017  
MATRIX: WATER  
DATE SAMPLED: 08/23/96  
DATE RECEIVED: 08/29/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate % Recovery  
1,4-Difluorobenzene 97  
4-Bromofluorobenzene 107  
METHOD 8020\*\*\*  
Analyzed by: VHZ  
Date: 09/01/96

Total Petroleum Hydrocarbons-Gasoline ND 0.05 P mg/L

Surrogate % Recovery  
1,4-Difluorobenzene 90  
4-Bromofluorobenzene 123  
CA LUFT - Gasoline  
Analyzed by: VHZ  
Date: 09/01/96 08:26:00

ND - Not detected. (P) - Practical Quantitation Limit

Notes: \*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA  
\*\*Ref: Standard Methods for Examination of Water & Wastewater, 18th ed  
\*\*\*Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.  
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HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9608E71-05

BP Oil Company  
 295 SW 41st St, Bldg 13, Ste N  
 Renton, WA 98055  
 ATTN: Scott Hooton

P.O.#  
 G602087 , COC#084355  
 DATE: 09/07/96

PROJECT: BP Oil #11116  
 SITE: Dublin, CA  
 SAMPLED BY: Alisto Engineering  
 SAMPLE ID: S-5

PROJECT NO: 10-017  
 MATRIX: WATER  
 DATE SAMPLED: 08/23/96  
 DATE RECEIVED: 08/29/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	4240	500 P	µg/L
Benzene	54	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	113
4-Bromofluorobenzene	140 «

METHOD 8020\*\*\*

Analyzed by: LJ

Date: 09/05/96

Total Petroleum Hydrocarbons-Gasoline	2.3	0.05 P	mg/L
---------------------------------------	-----	--------	------

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	197 «

CA LUFT - Gasoline

Analyzed by: VHZ

Date: 09/01/96 08:53:00

(P) - Practical Quantitation Limit      ND - Not detected.

« - Recovery beyond control limits.

Notes: \*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA  
 \*\*Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.  
 \*\*\*Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.  
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HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9608E71-06

BP Oil Company  
 295 SW 41st St, Bldg 13, Ste N  
 Renton, WA 98055  
 ATTN: Scott Hooton

P.O.#  
 G602087 , COC#084355  
 DATE: 09/07/96

PROJECT: BP Oil #11116  
 SITE: Dublin, CA  
 SAMPLED BY: Alisto Engineering  
 SAMPLE ID: S-6

PROJECT NO: 10-017  
 MATRIX: WATER  
 DATE SAMPLED: 08/23/96  
 DATE RECEIVED: 08/29/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	520	100 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
<b>Surrogate</b>		<b>% Recovery</b>	
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	110		
METHOD 8020***			
Analyzed by: LJ			
Date: 09/04/96			
Total Petroleum Hydrocarbons-Gasoline	0.52	0.05 P	mg/L
<b>Surrogate</b>		<b>% Recovery</b>	
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	130		
CA LUFT - Gasoline			
Analyzed by: VHZ			
Date: 09/01/96 09:21:00			

(P) - Practical Quantitation Limit      ND - Not detected.

Notes: \*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA  
 \*\*Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.  
 \*\*\*Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

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 SPL California License # 1903



Certificate of Analysis No. H9-9608E71-07

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

BP Oil Company  
295 SW 41st St, Bldg 13, Ste N  
Renton, WA 98055  
ATTN: Scott Hooton

P.O.#  
G602087 , COC#084355  
DATE: 09/07/96

PROJECT: BP Oil #11116  
SITE: Dublin, CA  
SAMPLED BY: Alisto Engineering  
SAMPLE ID: S-7

PROJECT NO: 10-017  
MATRIX: WATER  
DATE SAMPLED: 08/23/96  
DATE RECEIVED: 08/29/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	280	100 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	97
4-Bromofluorobenzene	103

METHOD 8020\*\*\*

Analyzed by: LJ

Date: 09/04/96

Total Petroleum Hydrocarbons-Gasoline	0.49	0.05 P	mg/L
---------------------------------------	------	--------	------

Surrogate	% Recovery
1,4-Difluorobenzene	90
4-Bromofluorobenzene	127

CA LUFT - Gasoline

Analyzed by: VHZ

Date: 09/01/96 09:49:00

(P) - Practical Quantitation Limit      ND - Not detected.

Notes: \*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA  
\*\*Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.  
\*\*\*Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.  
SPL California License # 1903

*QUALITY CONTROL*

*DOCUMENTATION*



Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_R960901112000

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) ‡ Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	47	94.0	20 - 110
Benzene	ND	50	47	94.0	62 - 121
Toluene	ND	50	46	92.0	66 - 136
EthylBenzene	ND	50	46	92.0	70 - 136
O Xylene	ND	50	44	88.0	74 - 134
M & P Xylene	ND	100	87	87.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	11	55.0	10	50.0	9.52	20	39 - 150
BENZENE	ND	20	21	105	20	100	4.88	25	39 - 150
TOLUENE	ND	20	21	105	20	100	4.88	26	56 - 134
ETHYLBENZENE	ND	20	21	105	21	105	0	38	61 - 128
O XYLENE	ND	20	20	100	19	95.0	5.13	29	40 - 130
M & P XYLENE	ND	40	40	100	38	95.0	5.13	20	43 - 152

Analyst: VHZ

Sequence Date: 09/01/96

SPL ID of sample spiked: 9608E71-01A

Sample File ID: R\_H6651.TX0

Method Blank File ID:

Blank Spike File ID: R\_H6641.TX0

Matrix Spike File ID: R\_H6646.TX0

Matrix Spike Duplicate File ID: R\_H6647.TX0

\* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery =  $\{ (\langle 1 \rangle - \langle 2 \rangle) / \langle 3 \rangle \} \times 100$

LCS % Recovery =  $(\langle 1 \rangle / \langle 3 \rangle) \times 100$

Relative Percent Difference =  $\{ (\langle 4 \rangle - \langle 5 \rangle) / [(\langle 4 \rangle + \langle 5 \rangle) \times 0.5] \} \times 100$

(\*\*) = Source: SPL-Houston Historical Data (3rd Q '95)

(\*\*\*) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9608E71-01A 9608E71-02A 9608E71-03A 9608E71-04A  
 9608E71-05A 9608E71-06A 9608E71-07A 9608E72-01A  
 9608E72-02A 9608E72-03A 9608E72-04A 9608E72-05A  
 9608E72-06A 9608E72-07A 9608E72-08A 9608E72-09A  
 9608E72-10A 9608E73-01A 9608E73-02A



Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_R960905011900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	49	98.0	20 - 110
Benzene	ND	50	51	102	62 - 121
Toluene	ND	50	49	98.0	66 - 136
EthylBenzene	ND	50	50	100	70 - 136
O Xylene	ND	50	47	94.0	74 - 134
M & P Xylene	ND	100	92	92.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	18	90.0	17	85.0	5.71	20	39 - 150
BENZENE	ND	20	23	115	23	115	0	25	39 - 150
TOLUENE	ND	20	23	115	22	110	4.44	26	56 - 134
ETHYLBENZENE	ND	20	23	115	23	115	0	38	61 - 128
O XYLENE	ND	20	23	115	22	110	4.44	29	40 - 130
M & P XYLENE	ND	40	45	112	43	108	3.64	20	43 - 152

Analyst: LJ

Sequence Date: 09/05/96

SPL ID of sample spiked: 9609067-03A

Sample File ID: R\_I6073.TX0

Method Blank File ID:

Blank Spike File ID: R\_I6061.TX0

Matrix Spike File ID: R\_I6090.TX0

Matrix Spike Duplicate File ID: R\_I6091.TX0

\* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery =  $[( <1> - <2> ) / <3> ] \times 100$

LCS % Recovery =  $( <1> / <3> ) \times 100$

Relative Percent Difference =  $[ ( <4> - <5> ) / [ ( <4> + <5> ) \times 0.5 ] ] \times 100$

(\*\*) = Source: SPL-Houston Historical Data (3rd Q '95)

(\*\*\*) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9608E71-05A 9609067-01A 9609067-02A 9609067-03A  
9609067-05A 9609067-07A 9609067-08A 9609067-10A  
9608E73-05A 9608E73-06A 9608E73-08A





Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_R960904021900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	55	110	20 - 110
Benzene	ND	50	55	110	62 - 121
Toluene	ND	50	55	110	66 - 136
EthylBenzene	ND	50	54	108	70 - 136
O Xylene	ND	50	53	106	74 - 134
M & P Xylene	ND	100	100	100	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	24	120	24	120	0	20	39 - 150
BENZENE	ND	20	25	125	25	125	0	25	39 - 150
TOLUENE	1.3	20	25	118	25	118	0	26	56 - 134
ETHYLBENZENE	ND	20	24	120	25	125	4.08	38	61 - 128
O XYLENE	ND	20	23	115	24	120	4.26	29	40 - 130
M & P XYLENE	ND	40	45	112	45	112	0	20	43 - 152

Analyst: LJ

Sequence Date: 09/04/96

SPL ID of sample spiked: 9608E77-02A

Sample File ID: R\_I6030.TX0

Method Blank File ID:

Blank Spike File ID: R\_I6019.TX0

Matrix Spike File ID: R\_I6025.TX0

Matrix Spike Duplicate File ID: R\_I6026.TX0

\* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [( <1> - <2> ) / <3> ] x 100

LCS % Recovery = ( <1> / <3> ) x 100

Relative Percent Difference = |( <4> - <5> | / [( <4> + <5> ) x 0.5] x 100

(\*\*) = Source: SPL-Houston Historical Data (3rd Q '95)

(\*\*\*) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9608E77-02A 9608E77-05A 9608E77-01A 9608E77-03A  
9608E77-04A 9608E73-07A 9608E71-06A 9608E71-07A  
9608E73-03A 9608E73-04A



Matrix: Aqueous  
Units: mg/L

Batch Id: HP\_R960901112001

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons-Gas	ND	1.0	1.2	120	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.74	82.2	0.79	87.8	6.59	50	50 - 150

Analyst: VHZ

Sequence Date: 09/01/96

SPL ID of sample spiked: 9608E71-02A

Sample File ID: RRH6652.TX0

Method Blank File ID:

Blank Spike File ID: RRH6643.TX0

Matrix Spike File ID: RRH6648.TX0

Matrix Spike Duplicate File ID: RRH6649.TX0

\* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery =  $\frac{(<1> - <2>) / <3>}{<3>} \times 100$

LCS % Recovery =  $\frac{(<1> / <3>)}{<3>} \times 100$

Relative Percent Difference =  $\frac{|(<4> - <5>)|}{[(<4> + <5>) \times 0.5]} \times 100$

(\*\*) = Source: Temporary Limits

(\*\*\*) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID):

9608E71-01A 9608E71-02A 9608E71-03A 9608E71-04A  
 9608E71-05A 9608E71-06A 9608E71-07A 9608E72-01A  
 9608E72-02A 9608E72-03A 9608E72-04A 9608E72-05A  
 9608E72-06A 9608E72-07A 9608E72-08A 9608E72-09A  
 9608E72-10A 9608E73-01A 9608E73-02A

***CHAIN OF CUSTODY***  
***AND***  
***SAMPLE RECEIPT CHECKLIST***



96-08-ET1

# CHAIN OF CUSTODY

No. 084355

Page 1 of 1  
ZIP CODE 94596

CONSULTANT'S NAME: **Alisto Engineering** ADDRESS: **1575 Treat Blvd #201 W.C. G** CITY: **W.C.** STATE: **G** ZIP CODE: **94596**

BP SITE NUMBER: **11116** BP CORNUL ADDRESS/CITY: **Dublin, G** CONSULTANT PROJECT NUMBER: **10-017**

CONSULTANT PROJECT MANAGER: **Brady Neale** PHONE NUMBER: **(510) 295-1650** FAX NUMBER: **295-1823** CONSULTANT CONTRACT NUMBER: **G602087**

BP CONTACT: **Scott Boston** BP ADDRESS: **Renton, WA** PHONE NUMBER: FAX NO:

LAB CONTACT: **SPL** LABORATORY ADDRESS: **Texas** PHONE NUMBER: FAX NO:

SAMPLED BY (Please Print Name): **Larry Buenavente** SAMPLED BY (Signature): *[Signature]* SHIPMENT DATE: SHIPMENT METHOD: **Fed Ex**

AIRBILL NUMBER: **6660583473**

QAT  24 Hours  48 Hours  1 Week  Standard 2 Weeks

### ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE		LAB SAMPLE #	COMMENTS
			NO.	TYPE (VOL.)		LAB SAMPLE #		
S-1	8/23/16	W	3	HL			1-5 2-5 3-5 4-5 5-5 6-5 7-5	
S-2								
S-3								
S-4								
S-5								
S-6								
S-7								

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>[Signature]</i>	8/24/16	1200	<i>[Signature]</i> / SPL	8-29-16	0945	SOL ROI, intact

# SPL Houston Environmental Laboratory

## Sample Login Checklist

Date: 8-29-96	Time: 0945
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SPL Sample ID:

96-08-E71

		<u>Yes</u>	<u>No</u>
1	Chain-of-Custody (COC) form is present.	✓	
2	COC is properly completed.	✓	
3	If no, Non-Conformance Worksheet has been completed.		
4	Custody seals are present on the shipping container.	✓	
5	If yes, custody seals are intact.	✓	
6	All samples are tagged or labeled.	✓	
7	If no, Non-Conformance Worksheet has been completed.		
8	Sample containers arrived intact	✓	
9	Temperature of samples upon arrival:	30	<b>C</b>
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	6660583473
		Other:	
11	Method of sample disposal.	SPL Disposal	
		HOLD	
		Return to Client	

Name:	Date: 8-29-96
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BP EXPLORATION & OIL, INC.  
 ENVIRONMENTAL REMEDIATION MANAGEMENT  
 DATA REVIEW CHECKLIST

BP Site Number: 11116  
 ERM Contact: 9/12/96  
 Sampling Date: 8/23/96  
 Matrix Description: groundwater  
 Date Final Report Received: \_\_\_\_\_  
 Laboratory & Location: SPL-TX

	Yes	No	NA
1. Is BP contract release number consistent with analytical report?	_____	<u>X</u> <sup>①</sup>	_____
2. Was report submitted within the specified timeframe?	<u>X</u>	_____	_____
3. Does report agree with the COC?	<u>X</u>	_____	_____
4. Are units consistent with the given matrix?	<u>✓</u>	_____	_____
5. Were any target analytes/compounds detected in blanks (ie. trip or equipment)?	_____	_____	<u>X</u>
6. Are duplicate water samples within <u>30</u> %?	<u>X</u>	<u>X</u> <sup>③</sup>	_____
7. Are holding times met?	<u>X</u>	_____	_____
8. Are surrogates within limits using laboratory criteria?	_____	<u>X</u> <sup>②</sup>	_____
9. Are MS/MSD acceptable using laboratory criteria?	<u>X</u>	_____	_____
10. Are LCS results acceptable using laboratory criteria?	<u>X</u>	_____	_____

Notes/Comments: ① consistent w/ COC but COC did not list new contract no.  
② surrogate exceeded lab QC for S-5  
③ MTBE exceeded (see table attached)

Data Validation Completed by (print): Bill Howell  
 (signature): Bill Howell  
 Date: 10/16/96

Calculation of RPD  
for BP Oil QA/QC Program  
BP Oil Station 11116 8/23/96 Event

Analytical Data	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Primary Sample	520	0.5	1	1	1	520
QC-1 Duplicate	490	0.5	1	1	1	280
Sample Mean	505	1	1	1	1	400
RPD	5.94%	0.00%	0.00%	0.00%	0.00%	60.00%
Significant Result?	NO	NO	NO	NO	NO	YES

Notes:

- (1) Significance is defined as an RPD greater than 30% (or less than -30)
- (2) "A negative" RPD will result if the value of the Primary Sample Result is smaller than QC-1  
The determination of Significant Result is not affected by sign of RPD